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| 10/625,272 | 07/23/2003 | Kazuya Tsujimichi | KYP-105-A | 8414 |
| 21828 7590 06/02/2009 CARRIER BLACKMAN AND ASSOCIATES 24101 NOVI ROAD SUITE 100 NOVI, MI 48375 | | | EXAMINER JOHNSON, EDWARD M | |
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/625,272
Filing Date: July 23, 2003
Appellant(s): TSUJIMICHI ET AL.

Joseph Carrier
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/24/09 appealing from the Office action
mailed 5/30/08

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Art Unit: 1793

5,854,708

KOMATSU ET AL.

12-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 53-54, 56-58, 60, and 66-67 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Komatsu et al. US 5,854,708.

Regarding claim 53, Komatsu '708 discloses an anti-fog method comprising contacting air with a material comprising a glass substrate and a photocatalyst film (see abstract and column 2, lines 25-32) wherein the film comprises inorganic oxides such as Al_2O_3 and SiO_2 and has a hydrophilic property (see column 2, lines 33-35) and TiO_2 , which is excited by light. The method of Komatsu would inherently clean air because Komatsu discloses that NO_x in the air is deposited in the openings of the disclosed composition and dissolved and removed (column 2, lines 25-32), which would clean air by removing NO_x therefrom, as disclosed. The components are all in close proximity in a layer over the substrate as claimed with no intervening layers or components.

When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicant to

Art Unit: 1793

prove that the subject matter shown in the prior art does not possess the characteristics relied upon. In re Fitzgerald et al. 205 USPQ 594.

Regarding claims 54, 59, and 67, Komatsu '708 discloses the same thickness amount of titanium oxide and inorganic oxide (see column 4, lines 50-55), which would result in $a/(a+b)$ value of 0.5.

Regarding claim 56, Komatsu '708 discloses ZnO and ZnS (see column 2, lines 40-41), silver and copper (Example 2).

Regarding claims 57-58 and 66, Komatsu '708 discloses Cr and Al (see Examples).

Regarding claim 60, Komatsu '708 discloses a 2000 angstrom film thickness (see column 2, lines 65-67).

Claims 55, 59, 61-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu '708.

Regarding claim 55, Komatsu fails to disclose particles having a diameter of 0.005 to 0.5 microns.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use particles having a diameter of 0.005 to 0.5 microns in the photocatalyst of Komatsu because Komatsu discloses a film thickness of about 1000 angstroms, which would motivate an ordinarily skilled artisan to

Art Unit: 1793

use particles of about that diameter to create a film of particles having the disclosed thickness.

Regarding claim 59, Komatsu discloses an embodiment comprising titania of 2000 angstrom thickness and inorganic oxide film of 150 angstroms, which would motivate an ordinary artisan to use an optimum ratio of titania and Al including 0.00001-0.05 arrived at through routine experimentation.

Regarding claims 61-64, Komatsu '708 discloses a film of SiO_2 , which is Applicant's preferred binder, on rectangular substrates (see Figures), which would motivate an ordinary artisan to form a glaze or paint on a tile to make the film to be exposed to light, as disclosed.

Regarding claim 65, Komatsu '708 discloses a glass substrate, which would at least suggest calcium silicate glass to an artisan of ordinary skill.

(10) Response to Argument

It is argued that directly contrary to the claimed invention... *single surface layer*... photocatalyzer film 12. This is not persuasive because Applicant's specification also describes discrete layers and sols at pages 25-26 of the instant specification, Applicant's alleged support for the claimed single layer. This argument is also not persuasive because Applicant admits that each of the prior art layers are "provided on the surface of the other," which would comprise a single layer, since there are no

Art Unit: 1793

intervening layers. Thus, at least some contact and combination of the two would occur in both the prior art and in the claim.

It is argued that moreover, given that Komatsu's disclosed... in view of Komatsu. This is not persuasive for the reasons above. Komatsu does not "teach away" from Applicant's invention because Komatsu nowhere specifically teaches that Applicant's invention should be avoided.

It is argued that apart from the fact that Komatsu fails... *in the alternative*. It is argued that appellant respectfully traverses... or controlling law. This is not persuasive because Applicant appears to admit that the present application describes "discrete layers and sols" as alleged by the Examiner.

It is argued that regarding the Examiner's Response c) above... of the law. This is not persuasive because Komatsu does not "teach away" from Applicant's invention because Komatsu nowhere specifically teaches that Applicant's invention should be avoided.

It is argued that regarding the Examiner's Response d) above... in *In re Fitzgerald*. This is not persuasive because Applicant admits that each of the prior art layers are "provided on the surface of the other," which would comprise a single layer, since there are no intervening layers. Thus, at least some contact and combination of the two would occur in both the prior art and in the claim.

It is argued that quite differently, in *In re Fitzgerald*... and the prior art. This is not persuasive because the claimed and prior art structures are not indisputably difference,

Art Unit: 1793

since Applicant appears to admit that the present application describes “discrete layers and sols” as alleged by the Examiner.

It is argued that the dependent claims are allowable because of the same “single layer” argument above. This is not persuasive for the reasons above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Edward M. Johnson/

Edward M. Johnson

Conferees:

Roy King

/Roy King/

Supervisory Patent Examiner, Art Unit 1793

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